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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/325,705	06/04/1999	TORU YAMADA	088941-0138	3162

7590

10/02/2003

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EXAMINER

WONG, ALLEN C

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 10/02/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/325,705

Applicant(s)

YAMADA, TORU

Examiner

Allen Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/22/03 have been fully read and considered but they are not persuasive.

Regarding lines 20-22 on page 5 of applicant's remarks, applicant asserts that Yonemitsu does not disclose the field selector to select one of odd and even fields forming each frame. The examiner respectfully disagrees. See figure 29 and and col.29, ln.3-8. At the field encoding mode, note that only one field, ie. even or odd, is selected for use during the determination of the frame based on the pixel data calculations, where each field has some of the plurality of field blocks in which a group of field pixels form a field block. Thus, the field, odd or even, that best represents the frame image is determined by calculating the even field motion vector and the odd field motion vector. And whichever field motion vector has the least amount of error, that field motion vector will ultimately determine the field used for display a high quality image frame.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonemitsu (5,485,279) in view of Matsushima (5,453,788).

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Regarding claims 1 and 3, Yonemitsu discloses a method for displaying frames of a dynamic image using single field data from an interlaced encoded image data having a two-field structure, comprising the steps of:

performing inverse quantization of the interlaced encoded image data to obtain DCT (Discrete Cosine Transform) coefficients of each of a plurality of field blocks that comprise a frame (fig.15, element 72);

selecting only one of two fields that form the frame, each field consisting of some of the plurality of field blocks (fig.9A, element 52; see fig.29 and col.29, ln.3-8, at the field encoding mode, note only one field, ie. even or odd, is selected for use during the determination of the frame based on the pixel data calculations, where each field has some of the plurality of field blocks in which a group of field pixels form a field block);

adding zero values after the DCT coefficients of each of field block in the selected field in order to obtain compensated DCT coefficients having a data size corresponding to a frame block (fig.15, element 92); and

performing inverse DCT of the compensated DCT coefficients to obtain image data corresponding to a frame block (fig.15, element 93); and

displaying the image data (fig.15, note "SDTV SIGNAL" is the signal displayed at output).

Although Yonemitsu's element 92 is not specifically the "adding the zero values...", as described in the applicant's specification, because the zero values are used to make the block smaller (ie. from 8x8 block to 4x4 block). However, Matsushima teaches the adding of zero values after the DCT coefficients is done to enlarge the

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image data size (see fig.5C and col.5, lines 4-8). Therefore, it would have been obvious to one of ordinary skill in the art to implement the teachings of Yonemitsu and Matsushima as a whole for permitting the size adjustment of the selected field block into having the size of the frame block so as to yield superior image quality. Doing so would allow the viewer to clearly see the image data at an appropriate image resolution at a highly efficient decoding speed and reduce costs.

Note claim 3 has similar corresponding elements.

Regarding claims 2 and 4, Yonemitsu discloses the motion compensation process (fig.15, element 76).

Regarding claim 5, Yonemitsu similarly discloses the limitations as elaborated above for claim 1, and in addition, the compressed data buffer (fig.15, element 71; note the compressed data is temporarily stored). Although Yonemitsu does not specifically disclose the frame data buffer, it would have been obvious to one of ordinary skilled in the art to include a frame data buffer for storing image frame data to prevent loss of important image frame data. Doing so would retain vital image data and prepare it for high-quality image display. Also, memory is extremely affordable and it can be bought at relatively low costs.

Regarding claim 6, Yonemitsu discloses the motion compensation process (fig.15, element 76).

Regarding claim 7, Yonemitsu discloses a display (fig.15, note "SDTV SIGNAL" is the signal displayed at output).

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Regarding claims 8 and 9, Yonemitsu discloses a data buffer that temporarily stores the interlaced encoded image data, wherein the interlaced encoded image data in the data buffer is subjected to inverse quantization (fig.15, element 71, note element 71 can also be considered a temporary storage for the interlaced encoded image data since it precedes the next step of inverse quantization at element 72; also Yonemitsu's figure 13 shows that element 70 or element 71 can be used to temporarily store the image data before subjecting the image data to inverse quantization circuit 72).

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (703) 306-

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5978. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Allen Wong
Examiner
Art Unit 2613

AW
9/30/03


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
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